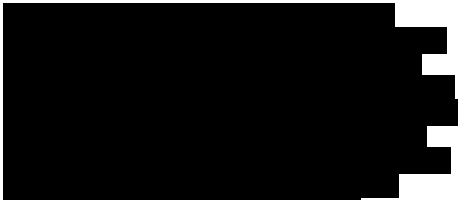


## Certification Summary Information Report

<b>Manufacturer</b>	BMW	<b>Manufacturer Code</b>	BMX
<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Certificate Number</b>	N/A	<b>Certificate Issue Date</b>	N/A
<b>Certificate Effective Date</b>	N/A	<b>Certificate Revision Date</b>	N/A

<b>General Information</b>			
<b>Vehicle Category</b>	Highway Motorcycle - III(>-279cc)	<b>Sales Areas of All Vehicles/Engines in This Engine Family</b>	All Models Are 50 States
<b>Small Volume Manufacturer Recognition</b>	Regular Volume	<b>Are you Certifying This Vehicle/Engine By Design</b>	No
<b>Manufacturer Code assigned by CARB</b>	BMW	<b>Parent Company Name</b>	--
<b>EPA Certification Fee Paid Date</b>	02/01/2019	<b>Application Type</b>	Correction
<b>Permeation Family Name</b>		<b>Does this Perm Family participate in Average Banking and Trading?</b>	
LBMXPMETAL51		No	
LBMXPP102BK5		No	
<b>Does this EF participate in an EPA and/or CARB emission averaging program?</b>	No	<b>Does this EF participate in EPA and/or CARB emission averaging program?</b>	
<b>Testing procedure applied for exhaust emissions values</b>	40CFR86, Subpart E: Chassis test	<b>If Other, Please provide EPA/CARB approval ID for this testing procedure</b>	--
<b>Are you the original manufacturer of the certifying vehicle/engine?</b>	Yes		
<b>Vehicle Original Equipment Manufacturer</b>	<b>Country where the Vehicles were assembled</b>	<b>Engine Original Equipment Manufacturer</b>	<b>Country where the Engines were assembled</b>
BMW AG	Germany	BMW AG	Germany
			
<b>Manufacturer Comments</b>			

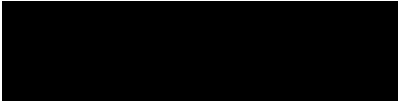
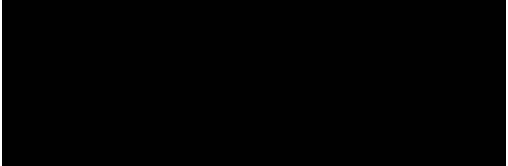

## Certification Summary Information Report

Engine Family	LBMXC01.34K5	Model Year	2020			
EPA Emission Standards and Certification Levels						
EPA Exhaust Emissions units:G/KM						
Air Pollutant	HC	NOx	HC+NOx	CO		
Certification Level			0.1	0.2		
Family Emission Limit						
Emission Standards			0.8	12.0		
Applicant Notes	--					
CARB Emission Standards and Certification Levels						
CARB HMC Early Compliance Multiplier: 1.0			Evaporative Emissions (HMC CARB-only) Diurnal + Hot Soak Evaporative Emissions (Unit: g/test):			
Air Pollutant	THC	NOx	THC+NOx	CO	LBMXU0021K51	
Certification Level	0.04		0.1	0.2	0.4	
Family Emission Limit						
Emission Standards			0.8	12	2.0	
Emission Useful Life (UL) as applicable	UL (years):5		UL (km):30000		UL (years):5	UL (km):30000
Applicant Notes:	--					
Certification Level	0.04		0.1	0.2	1.1	
Family Emission Limit						
Emission Standards			0.8	12	2.0	
Emission Useful Life (UL) as applicable	UL (years):5		UL (km):30000		UL (years):5	UL (km):30000
Applicant Notes:	--					

## Certification Summary Information Report

<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Engine Family Description</b>			
<b>Engine Family Useful Life</b>	EPA Required Useful Life		
<b>EF Fuel System Type</b>	Single Fuel System		
	<b>Primary Operating Fuel Type</b>		<b>Fuel Type, If Other</b>
	Gasoline		--
<b>Combustion Cycle</b>	4-Stroke		
<b>Combustion Cycle, If Other</b>			
<b>Cylinder Arrangement</b>	Horizontally Opposed (Flat)		
<b>Cylinder Arrangement, If Other</b>			
<b>Number of Cylinders</b>	2	<b>Valves per Cylinder</b>	4
<b>Engine Type</b>	Reciprocating (otto cycle)		
<b>Engine Type, If Other</b>			
<b>Engine Cooling Media</b>	Liquid Cooled		
<b>Engine Cooling Media, If Other</b>			
<b>Does this engine family contain multiple displacements?</b>	No	<b>New Technology</b>	No
<b>Technology explanation</b>	--		
<b>Applicant Notes</b>			
--			

## Certification Summary Information Report

<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Exhaust Emission Control Information</b>			
<b>ECS Reference Number</b>	1	<b>Is this engine family equipped with a catalytic converter?</b>	Yes
<b>Total number of catalytic converters</b>	1	<b>Applicable catalytic converter configuration</b>	Single
<b>Catalytic converter type used</b>	Three Way Catalyst (TWC), single-bed, closed-loop warm up		
<b>Catalyst Manufacturer Name</b>			
<b>Does the engine family use an Exhaust Gas Recirculation (EGR) technology as part of the Emission Control System?</b>	No	<b>Catalyst Manufacturer Location</b>	
<b>Applicable engine fuel system type</b>	Multiport FI	<b>Description of the EGR technology used</b>	--
<b>If Other, Enter a description of the fuel system</b>			
<b>Method of air aspiration for the engine</b>	Naturally Aspirated		
<b>Method of engine aspiration, If Other</b>			
<b>Charge Air Cooler Type</b>	No Air Cooler		
<b>Electronic engine control module type</b>	Engine Control Module		
<b>Applicable method of air injection methodology</b>	Not Applicable		
<b>Air injection methodology, If Other</b>			
<b>Air/fuel feedback sensor used on this engine family</b>	Yes		
<b>Sensor Type</b>	Heated Oxygen Sensor		
<b>Sensor Type, If Other</b>			
<b>Number of feedback sensor(s) used</b>	3		
<b>Configuration of the feedback sensors arrangement</b>	Three or More Sensors in Both Parallel and Series		
<b>Applicant Notes</b>			

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## Certification Summary Information Report

Engine Family		LBMXC01.34K5		Model Year		2020	
Federal Mandatory Greenhouse Gas (GHG) Reporting							
GHG Name	GHG Value	Unit of GHG Value	Measured/Estimated at Distance (km)	By Method	Test Vehicle ID	Reference/Citations	Test/Estimation Date
CH4	0.006	Grams Per Kilometer	3655	Tested result from the EDV(s) of the Engine Family	WB10J5305JZF77075	--	12/07/2017
N2O	0.004	Grams Per Kilometer	3655	Derived results based on EPA GHG default factor	--	US EPA GHC Inventory Guidance	N/A
CO2	127.4	Grams Per Kilometer	3655	Tested result from the EDV(s) of the Engine Family	WB10J5305JZF77075	--	12/07/2017
Applicant notes for GHG data							
--							

## Certification Summary Information Report

Engine Family	LBMXC01.34K5	Model Year	2020
<b>EPA - ONLY Permeation Emissions Control/Test Data</b>			
<b>Fuel Tank Permeation Emissions Details</b>			
<b>Fuel Tank #1</b>			
Permeation Family Name	LBMXPP102BK5	Certification Level (g/m2/day)	1.0
Emission Standard (g/m2/day)	1.5	Family Emission Limit (g/m2/day)	--
Certification Method	Emission tests	Fuel Tank Manufacturer	ELKAMET
<b>Other</b>			
Use Carry-over Test Data?	Yes	If carryover, from Permeation Family	KBMXPP102BK5
Carryover DF	No	If carryover, from DF Permeation Family	--
Tank Material	Plastic		
Tank Material if Other			
Control Strategy	Inherently Low/Zero Permeation Material		
Least Thickness (mm)	1	Least Barrier Weight (%)	--
Least Barrier Mol (%)	--	Least Barrier Thickness (mm)	--
Production Method	Blow-Molded Tank		
Production Method if Other			
Test Data (g/m2/day)	0.01	DF (g/m2/day)	--
EPA Certificate Number	--		
<b>Fuel Tank #2</b>			
Permeation Family Name	LBMXPMETAL51	Certification Level (g/m2/day)	1.5
Emission Standard (g/m2/day)	1.5	Family Emission Limit (g/m2/day)	--
Certification Method	Design technologies (per 40 CFR 1051.245 Table 1)	Fuel Tank Manufacturer	BMW
Applicable permeation emission certify-by-design technology category	based on 40CFR1051.245, Table 1 (ii)		
<b>Other</b>			
Use Carry-over Test Data?	--	If carryover, from Permeation Family	--
Carryover DF	--	If carryover, from DF Permeation Family	--
Tank Material if Other			
Least Thickness (mm)	--	Least Barrier Weight (%)	--
Least Barrier Mol (%)	--	Least Barrier Thickness (mm)	--
Production Method if Other			
Test Data (g/m2/day)	--	DF (g/m2/day)	--
EPA Certificate Number	--		
<b>Fuel Line Permeation Emissions Details</b>			
<b>Fuel Line #1</b>			

## Certification Summary Information Report

Engine Family	LBMXC01.34K5	Model Year	2020
<b>Certification Level (g/m2/day)</b>	15	<b>Emission Standard (g/m2/day)</b>	15
<b>Permeation Emissions Certification Method</b>	Design technologies (per 40 CFR 1051.245 Table 2)	<b>Fuel Line Manufacturer</b>	ContiTech
<b>Certified By Design LINE</b>	--	<b>Applicable permeation emission certify-by-design technology category</b>	based on 40CFR1051.245, Table 1 (i)
<b>Other</b>			
<b>Use Carry-over Test Data?</b>	--	<b>If carryover, from Permeation Family</b>	--
<b>Carryover DF</b>	--	<b>If carryover, from DF Permeation Family</b>	--
<b>Fuel Line Material</b>			
<b>Least Thickness (mm)</b>	--	<b>Test Results (g/m2/day)</b>	--
<b>DF (g/m2/day)</b>	--	<b>EPA Certificate Number</b>	--
<b>Fuel Line #2</b>			
<b>Certification Level (g/m2/day)</b>	5.5	<b>Emission Standard (g/m2/day)</b>	15
<b>Permeation Emissions Certification Method</b>	Emission tests	<b>Fuel Line Manufacturer</b>	ContiTech
<b>Certified By Design LINE</b>	--		
<b>Other</b>			
<b>Use Carry-over Test Data?</b>	Yes	<b>If carryover, from Permeation Family</b>	KBMXPP102BK5
<b>Carryover DF</b>	No	<b>If carryover, from DF Permeation Family</b>	--
<b>Fuel Line Material</b>	Plastic		
<b>Fuel Line Material</b>			
<b>Least Thickness (mm)</b>	3	<b>Test Results (g/m2/day)</b>	0.01
<b>DF (g/m2/day)</b>	--	<b>EPA Certificate Number</b>	--
<b>Comments</b>			
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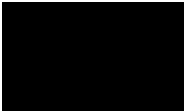

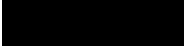
## Certification Summary Information Report

<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Models Covered</b>			
<b>Model #1</b>			
<b>Reference Model Number</b>	1	<b>Final Assembly Manufacturer Name</b>	BMW
<b>Manufacturer Model Name</b>	K51MUE	<b>Commercial / Advertised Model Name</b>	R1250GS Adventure
<b>Engine Code</b>	A74B12M	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	LBMXU0021K51	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	1254	<b>Bore (mm)</b>	102.5
<b>Stroke (mm)</b>	76	<b>Basic Ignition Timing (degrees, BTDC)</b>	0.1
<b>Rated Power (kW)</b>	100	<b>RPM @ Rated Power</b>	7750
<b>Rated Torque (nt-m)</b>	143	<b>RPM @ Rated Torque</b>	6250
<b>N/V Ratio</b>	35.36	<b>Curb Mass (kg)</b>	268
<b>Equivalent Inertial Mass (kg)</b>	350	<b>Loaded Vehicle Mass (kg):</b>	348
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>			
50-state sales w/ 50-state Label			
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	LBMXPMETAL51		
<b>Applicant Notes</b>			
<b>Model #2</b>			
<b>Reference Model Number</b>	2	<b>Final Assembly Manufacturer Name</b>	BMW
<b>Manufacturer Model Name</b>	K52TUE2	<b>Commercial / Advertised Model Name</b>	R1250RT
<b>Engine Code</b>	A74B12M	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	LBMXU0021K5X	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	1254	<b>Bore (mm)</b>	102.5
<b>Stroke (mm)</b>	76	<b>Basic Ignition Timing (degrees, BTDC)</b>	0.1
<b>Rated Power (kW)</b>	100	<b>RPM @ Rated Power</b>	7750
<b>Rated Torque (nt-m)</b>	143	<b>RPM @ Rated Torque</b>	6250
<b>N/V Ratio</b>	33.72	<b>Curb Mass (kg)</b>	279
<b>Equivalent Inertial Mass (kg)</b>	360	<b>Loaded Vehicle Mass (kg):</b>	359
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>			
50-state sales w/ 50-state Label			
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	

## Certification Summary Information Report

<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	LBMXPP102BK5		
<b>Applicant Notes</b>			
<b>Model #3</b>			
<b>Reference Model Number</b>	3	<b>Final Assembly Manufacturer Name</b>	BMW
<b>Manufacturer Model Name</b>	K53MUE	<b>Commercial / Advertised Model Name</b>	R1250R
<b>Engine Code</b>	A74B12M	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	LBMXU0021K5X	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	1254	<b>Bore (mm)</b>	102.5
<b>Stroke (mm)</b>	76	<b>Basic Ignition Timing (degrees, BTDC)</b>	0.1
<b>Rated Power (kW)</b>	100	<b>RPM @ Rated Power</b>	7750
<b>Rated Torque (nt-m)</b>	143	<b>RPM @ Rated Torque</b>	6250
<b>N/V Ratio</b>	34.53	<b>Curb Mass (kg)</b>	239
<b>Equivalent Inertial Mass (kg)</b>	320	<b>Loaded Vehicle Mass (kg):</b>	319
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	50-state sales w/ 50-state Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	LBMXPP102BK5		
<b>Applicant Notes</b>			
<b>Model #4</b>			
<b>Reference Model Number</b>	4	<b>Final Assembly Manufacturer Name</b>	BMW
<b>Manufacturer Model Name</b>	K54MUE	<b>Commercial / Advertised Model Name</b>	R1250RS
<b>Engine Code</b>	A74B12M	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	LBMXU0021K5X	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	1254	<b>Bore (mm)</b>	102.5
<b>Stroke (mm)</b>	76	<b>Basic Ignition Timing (degrees, BTDC)</b>	0.1
<b>Rated Power (kW)</b>	100	<b>RPM @ Rated Power</b>	7750
<b>Rated Torque (nt-m)</b>	143	<b>RPM @ Rated Torque</b>	6250
<b>N/V Ratio</b>	34.53	<b>Curb Mass (kg)</b>	243
<b>Equivalent Inertial Mass (kg)</b>	320	<b>Loaded Vehicle Mass (kg):</b>	323

## Certification Summary Information Report

<b>Engine Family</b>	LBMXC01.34K5	<b>Model Year</b>	2020
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	50-state sales w/ 50-state Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	LBMXPP102BK5		
<b>Applicant Notes</b>			
<b>Model #5</b>			
<b>Reference Model Number</b>	5	<b>Final Assembly Manufacturer Name</b>	BMW
<b>Manufacturer Model Name</b>	K50TUE2	<b>Commercial / Advertised Model Name</b>	R1250GS
<b>Engine Code</b>	A74B12M	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	LBMXU0021K5X	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	1254	<b>Bore (mm)</b>	102.5
<b>Stroke (mm)</b>	76	<b>Basic Ignition Timing (degrees, BTDC)</b>	0.1
<b>Rated Power (kW)</b>	100	<b>RPM @ Rated Power</b>	7750
<b>Rated Torque (nt-m)</b>	143	<b>RPM @ Rated Torque</b>	6250
<b>N/V Ratio</b>	35.36	<b>Curb Mass (kg)</b>	249
<b>Equivalent Inertial Mass (kg)</b>	330	<b>Loaded Vehicle Mass (kg):</b>	329
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	50-state sales w/ 50-state Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>			
<b>Permeation Family Name (s)</b>	LBMXPP102BK5		
<b>Applicant Notes</b>	